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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,159	05/04/2006	Hiroshi Fukukita	10873.1862USWO	4649

53148 7590 03/27/2009

HAMRE, SCHUMANN, MUELLER & LARSON P.C.
P.O. BOX 2902-0902
MINNEAPOLIS, MN 55402

EXAMINER	
CHAO, ELMER M	

ART UNIT	PAPER NUMBER
3737	

MAIL DATE	DELIVERY MODE
03/27/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/578,159	FUKUKITA, HIROSHI	
	Examiner	Art Unit	
	ELMER CHAO	3737	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 May 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04 May 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1/7/2009 & 10/14/2008 & 5/4/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Acknowledgement is made of the amendment filed 5/4/2006.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1-5** are rejected under 35 U.S.C. 102(b) as being anticipated by Kawagishi et al. (U.S. 6,635,018 B2).

Regarding **claim 1**, Kawagishi et al. teach an ultrasonic diagnostic apparatus comprising: a transducer array in which a plurality of transducers for transmitting an ultrasonic wave to a subject and receiving a reflected wave therefrom are arrayed (see at least fig. 9a, item 12); a delay addition unit for performing parallel reception by carrying out a delay addition operation with respect to reception signals obtained by the transducer array (see at least fig. 1, item 23); and a deflection angle control unit for controlling a deflection angle for reception according to a setting for the delay addition operation carried out by the delay addition unit, wherein the deflection angle control unit

narrows an angle formed between a plurality of directions of reception directivities in the parallel reception as a deflection angle of a transmission beam transmitted from the transducer array increases (see at least: col. 10, lines 23-47, refer to “aperture” and "beam width"; fig. 9a & 9b; col. 15, lines 48 – col. 16, line 6).

Regarding **claim 2**, Kawagishi et al. teach the ultrasonic diagnostic apparatus further comprising a correction unit for performing control for changing sensitivity correction amounts for a plurality of reception signals in the parallel reception in a manner such that a decrease in a relative sensitivity in transmission-reception due to an increase in the deflection angle of the transmission beam is compensated (see at least: col. 4, lines 43-60, refer to “receiving condition corrector”; col. 15, lines 48 - col. 16, line 6).

Regarding **claim 3**, Kawagishi et al. teach the ultrasonic diagnostic apparatus, wherein the correction unit performs correction such that any of the plurality of reception signals received in a state such that angles between respective directions of reception directivities in the parallel reception and a direction of a directivity of the transmission beam are equal to one another have relative sensitivities equal to one another (see at least: col. 4, lines 43-60, refer to “receiving condition corrector” and “non-uniformity”; col. 15, lines 48 - col. 16, line 6, refer to “non-uniformity).

Regarding **claim 4**, Kawagishi et al. teach the ultrasonic diagnostic apparatus, wherein the deflection angle control unit performs control such that a difference between a deflection angle determining a direction of the transmission beam and a deflection angle determining a next direction of the transmission beam decreases as the

deflection angle of the transmission beam increases (see at least: fig. 21, items B_1-B_4; col. 10, lines 23-47, refer to “aperture” and "beam width", a smaller beam width would necessitate increasingly smaller deflection angles as the deflection angles increase in order to continuously scan the region).

Regarding **claim 5**, Kawagishi et al. teach the ultrasonic diagnostic apparatus, wherein the plurality of transducers are arrayed at least two-dimensionally (col. 6, lines 33-36), and a plurality of points at which the transmission beam crosses a projection face form lattice points that are arrayed two-dimensionally at uniform intervals (col. 6, lines 33-36, if a two-dimensional array is used then there would exist a projection face arrayed two-dimensionally at uniform intervals when the array is used for 3D volume imaging).

Alternatively regarding **claims 1-5**, Kawagishi et al. teach a system that is fully capable of performing the functional limitations as described by claim 1 (fig. 1, refer to system components).

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELMER CHAO whose telephone number is (571)272-0674. The examiner can normally be reached on 9am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Brian Casler can be reached on (571)272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BRIAN CASLER/
Supervisory Patent Examiner, Art Unit 3737

/E. C./
Examiner, Art Unit 3737
3/21/2009